Mem. Natn. Sci. Mus. Tokyo, (5), November 30, 1972

The Second Species of the Genus *Caecidium*

(Coleoptera, Bembidiinae)

By

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上野俊一*：メクラミズギワゴミムシ属の第二の種

The genus *Caecidium* was erected by the present writer (UÉNO, 1971 a, p. 147) for a remarkable endogean bembidiine occurring in the Yūbari mountains of central Hokkaido. It is depigmented and anophthalmic, showing a striking resemblance in facies to certain robust species of endogean trechines. Its true affinity is not certain, but the genus is considered to be a primitive one which represents a relict of an ancient fauna.

The type-species, *C. trechomorphum*, has been known from the two highest peaks of the Yūbaris, where it dwells in moist shaded places of the subalpine zone. As the other carabid beetles inhabiting the same habitats (above all trechines and patrobines) show a close relationship to those found in the Hidaka mountains (cf. UÉNO, 1971 b, pp. 24–27), discoveries of certain *Caecidium* have also been anticipated in the latter mountain range. It is, however, most unexpected that a representative of the genus occurs in Mt. Kariba-yama, which is widely distant from the Yūbaris and belongs to a different faunal division of the Island of Hokkaido.

In the summer of 1971, the writer had an opportunity to visit the high mountains of the Oshima Peninsula in southwestern Hokkaido, whose carabid fauna had not been investigated up to that time. His anticipation was that that part of Hokkaido should maintain a fauna either close to that of the southwestern hills of Sapporo or similar to that of the northern tip of Honshu. This presumption was largely proved true, but his collection also included a pair of anophthalmic bembidiines that doubtless belonged to *Caecidium*. After a careful examination, it becomes evident that the bembidiine is very close to the type-species of the genus in spite of the isolated situation of its habitat. This result is really striking from the zoogeographic point of view, which appears to suggest both the antiquity of the group and the slow progress of speciation within it.

Before going to describe the bembidiine beetle, the writer wishes to express his deep appreciation to Dr. Ryôsuke ISHIKAWA and Dr. Yukio YASUDA for their kind aid in the collecting trip to the high mountains of the Oshima area. But for their collaboration, this important discovery would never have been made.

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Caecidium yasudai S. Uéno, sp. nov.

Length: 4.35–4.50 mm (from apical margin of clypeus to apices of elytra).

Very closely allied to *C. trechomorphum* S. Uéno (1971 a, p. 150, figs. 1–8), with which it agrees in every detail excepting the following points:

Antennae somewhat longer and slenderer, reaching basal one-fourth of elytra, with segments 5–11 more elongate than in the type-species. Pronotum relatively ample, especially in basal half, widest at two-thirds from base and more strongly contracted towards apex than towards base; ratio of the width of pronotum to that of head 1.26–1.34, that of the width to the length of pronotum 1.20–1.21; ratio of the width of pronotum to that of pronotal apex 1.24–1.32, that to the width of pronotal base 1.16; surface more strongly convex than in the type-species, with a pair of dorsal setae at about apical two-ninths; sides feebly curved in front, nearly straight or very slightly arcuate behind the widest part, and not sinuate before hind angles, which are obtuse but more or less denticulate at the tips; side borders hardly indented even near hind angles; apex distinctly narrower than base, with front angles less acute than in the type-species; base more or less wider than in the type-species, ratio of the width of base to that of apex 1.07–1.14; basal foveae larger (or rather broader) than in the type-species. Elytra relatively elongate, widest at about three-sevenths from base, with the sides more weakly arcuate than in the type-species; ratio of the width of elytra to that of pronotum 1.53–1.55, that of the length to the width of elytra 1.56–1.58; surface less depressed on the disk; shoulders somewhat convex, not so perfectly effaced as in the type-species; striae somewhat deeper and more distinctly crenulate than in the type-species, 3 and 4 forming an apical anastomosis usually before the level of anterior apical pore; stria 3 with two setiferous dorsal pores at about basal one-fourth and a little behind middle.

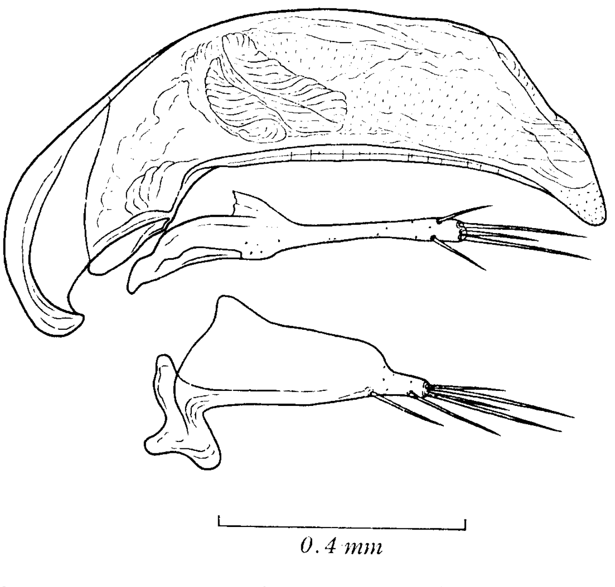

Fig. 1. *Caecidium yasudai* S. Uéno, sp. nov., of Mt. Kariba-yama; male genitalia with separated left style, left lateral view.

Aedeagus shorter and more regularly arcuate than in the type-species, about one-third as long as elytra, and moderately compressed, though being twisted as in the type-species; basal part moderately curved towards the ventral side, with long arcuate left lobe and rather narrow right one; apical lobe a little shorter and broader than in the type-species though generally similar to the latter; ventral side widely emarginate in profile. Styles shorter than those in the type-species, each with two stout setae at apex instead of one, and also with three (on the right) or four (on the left) shorter setae in the apical part.

Type-series. Holotype: ♂, allotype: ♀ (15–VII–1971, collected by S. UÉNO and deposited in the collection of the National Science Museum, Tokyo).

Type-locality. Mt. Kariba-yama, on the boundary between Hiyama and Shiribeshi, in the Oshima Peninsula of the southwestern part of Hokkaido, northern Japan.

Notes. This new species is so closely similar to *C. trechomorphum* that it could be regarded as a subspecies of the latter, were it not for a very wide geographical gap between their habitats. Its type-locality is more than 190 km distant from the known localities of the type-species. Moreover, the former is separated from the latter by the Ishikari lowland, which has not been crossed by all the other endogean beetles known up to the present. The Kariba population must have been isolated from the Yûbari ones for a very long time, and though it is not so greatly different from the latter in morphological features, the writer prefers to consider it to be a full species.

Mt. Kariba-yama (1,520 m in height) is the highest point of the Kariba volcanoes lying

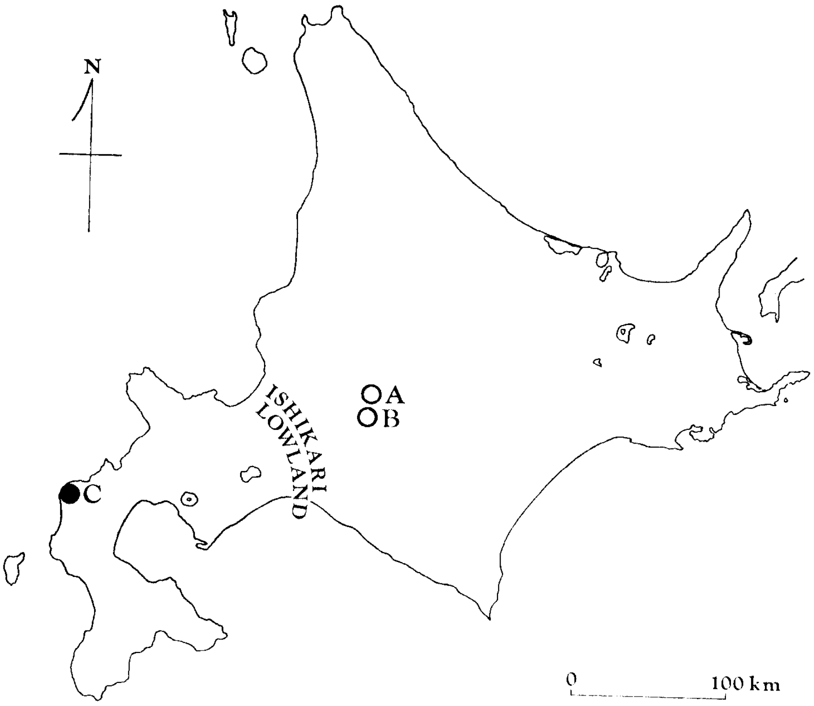

Fig. 2. Map showing the distribution of *Caecidium*. Open circles: *C. trechomorphum* S. UÉNO; black circle: *C. yasudai* S. UÉNO, sp. nov. —— A, Mt. Ashibetsu-daké; B, Mt. Yûbari-daké; C, Mt. Kariba-yama.

at the western side of the Oshima Peninsula. The volcanic hills are separated from the Niseko-Yôtei volcanoes by the Kuromatsunai lowland and from the non-volcanic Oshima hills by the Setana lowland. Therefore, the alpine areas of the Karibas are perfectly isolated from those of the nearby high mountains. The two known specimens of *C. yasudai* were taken on the southern ridge of the main peak at an elevation of about 1,100 m. They were found from under a large stone deeply embedded in the ground at the lower edge of a snow patch. The spot was in an alpine meadow and was very humid being fed by melting snow. Four individuals of depigmented beetles, two bembidiines and two trechines, were discovered on the soil beneath the same stone, and two of the four were more sluggish than the other two. Perhaps these sluggish individuals may have been *C. yasudai*, since trechine beetles are usually active when exposed.

要　約

メクラミズギワゴミムシ属 *Caecidium* S. Uéno は，夕張山脈の芦別岳と夕張岳とに分布する，盲目地中性の特異なミズギワゴミムシを模式種として，1971年に設けられたものである．由来や類縁関係は明らかでないが，剛毛式や♂交尾器の形状はひじょうに原始的で，この属の遺存性を示唆している．模式種のユウバリメクラミズギワゴミムシ *C. trechomorphum* S. Uéno は，その名の示すとおり，地中性のメクラチビゴミムシ類に酷似した外見をもち，後者と同一の環境にすんでいるので，野外で初めて見ると認知するのがかなりむずかしい．しかし，メクラチビゴミムシ類に比べると，動作はよほど緩慢である．

夕張山脈にすむ地中性のゴミムシ類は，いずれも日高山脈のものと密接な関連性を示すので，メクラミズギワゴミムシ類も日高山脈に分布しているのではないか，とかねてから推察されていた．しかし，南西方に遠く離れ，しかも日高・夕張両山系とは石狩低地帯によって完全に隔てられている，渡島半島日本海側の狩場山に，同属のものが不連続的に分布していようとは，1971年の夏に筆者がこの山の調査を行なうまで，まったく想像もされなかった．その上，狩場山のメクラミズギワゴミムシは，形態的には夕張山脈産の模式種にきわめて近く，わずかに前背板や♂交尾器などの形状の差が，別種の標徴として認められるに過ぎない．この事実は，メクラミズギワゴミムシ類の種分化の速度がひじょうに遅いことを示し，いちじるしい分布の不連続性とともに，この類の起原の古さを裏づけるものである．

この論文には，狩場山で発見された種に，カリバメクラミズギワゴミムシ *Caecidium yasudai* S. Uéno という新名を与えて記載した．学名は，渡島半島の高山の調査に際してたいへんお世話になった安田幸夫博士に捧げたものである．

References

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